

Remarks

This Application has been carefully reviewed in light of the Office Action mailed April 11, 2007. Although Applicant believes all claims are allowable without amendment, Applicant has made clarifying amendments to Claims 1, 9, 17, 24, 28, and 36. At least certain of these amendments are not considered narrowing or necessary for patentability. None of these amendments are made in response to the rejections based on the reference cited by the Examiner. Applicant respectfully requests reconsideration and allowance of all pending claims.

I. The Claims are Definite

The Examiner rejects Claims 1, 4-9, 12-17, 20-22, 24-28, and 31-36¹ under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Applicant respectfully traverses these rejections.

The essential inquiry pertaining to the definiteness requirement is whether the claims set out and circumscribe subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (a) the content of the particular application disclosure; (b) the teachings of the prior art; and (c) the claim interpretation that would be given by one possessing ordinary skill in the art at the time the invention was made. M.P.E.P. § 2173.02. Furthermore, the test for indefiniteness under Section 112, second paragraph, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” M.P.E.P. §2173.02 (citing *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986)). Applicant respectfully submits that those of ordinary skill in the art would understand Claims 1, 4-9, 12-17, 20-22, 24-28, and 31-36. The Examiner rejects different claims for different reasons, and Applicant addresses each of those reasons below.

¹ The Office Action actually states that Claims 1-28 and 31 are rejected (*see* Office Action, Page 2); however, only certain of these claims are still pending, and the Examiner actually provides an explicit rejection of each of Applicant’s independent claims (and certain dependent claims). Thus, Applicant assumes that each of the pending claims is rejected.

With respect to dependent Claims 6-7, 14-16, and 33-35, the Examiner states the following:

Claims 6, 7, 14-16, 33, 34 and 35 recite “can be.” Applicant should duly note that “can be pre-evaluated to true” raises questions as to whether the filter item can actually be pre-evaluated to true. The probability for the data item to be pre-evaluated is equal to the data item can not pre-evaluated. The same question raises for “can be ignored.”

(Office Action, Page 2)

Although it is not entirely clear, it appears that the Examiner is arguing that the use of “can be” in these claims renders these claims indefinite. Applicant respectfully disagrees and discusses Claim 6 as an example. Independent Claim 1 recites a method that comprises applying a condition test that comprises certain limitations recited in Claim 1 (*i.e.*, “determining if the filter item comprises a NOT connective” and “determining if the filter item comprises one of a type only filter item or a type and value filter item”). Claim 6 depends from independent Claim 1 and recites that the condition test “further comprises determining if each filter item can be pre-evaluated to true.” Certainly one of ordinary skill in the art would understand from the plain meaning of Claim 6 that the condition *test* of Claim 1 further comprises making the additional determination recited in Claim 6. In particular, the condition *test* of Claim 1 further comprises determining if each filter item *can be* pre-evaluated to true. It would have to be at least possible to pre-evaluate a filter item to true (in contrast to those filter items that cannot be pre-evaluated to true) for the portion of the condition test recited in Claim 6 to be met for that filter item. The Examiner’s statement that “‘can be pre-evaluated’ to true raises questions as to whether the filter item can actually be pre-evaluated to true” merely identifies the very determination being added by Claim 6 to the condition test recited in Claim 1.

With respect to independent Claims 1, 9, 17, 28, and 36, the Examiner states the following:

The applicant claims 1, 9, 17, 28 and 36 recite “applying a logical methodology to evaluate the NOT connective, the logical methodology comprising expanding an expression of the filter item so that the filter item does not comprise the NOT connective.” This limitation of the claim is in contradiction to the provided basis: “If the filter item with a NOT connective

is a type only filter item then a logical methodology can be utilized to evaluate or process the filter item which avoids a NOT in the SQL. The logical methodology may be a subtraction method expressed in expression 117 below or any other suitable methodology capable of expanding an expression so that the filter item does not contain NOT connectives” (specification page 12, lines 7-11). This portion of the specification does not evaluate the NOT connectivity using the logical methodology to expand an expression, but evaluates the filter item using the logical methodology to expand an expression.

(Office Action, Pages 2-3)

Although Applicant does not necessarily agree that the limitations identified by the Examiner render Claim 1 indefinite, Applicant has made a clarifying amendment to Claim 1 such that Claim 1 recites “if it is determined that the filter item comprises a NOT connective and a type only filter item, applying a logical methodology to evaluate the *filter item*, the logical methodology comprising expanding an expression of the filter item so that the filter item does not comprise the NOT connective.” Applicant has made similar amendments to Claims 9, 17, 28, and 36.

With respect to dependent Claims 5, 13, and 32, the Examiner states the following:

Claims 5, 13, and 32 recite “if it is determined that the filter item comprises a NOT connective and a type and value filter item, pushing the NOT connective associated with the type and value filter item inside the filter item, resulting in changing an operator inside the filter item.” This limitation of the claim is in contradiction to the provided basis: “If the filter item with a NOT connective is a type and value filter item then the present application pushes the NOT connective, into the filter item which avoids a NOT in the outer SQL” (page 12, lines 12-14). This passage does not describe eliminating the NOT connective, but pushing the NOT connective into a (different) filter item, thereby just avoiding a NOT connective in the outer join.

(Office Action, Page 3) Applicant respectfully disagrees and discusses Claim 5 as an example.

The source of the alleged contradiction is not entirely clear to Applicant from the Examiner’s statement. Claim 5 recites that “if it is determined that the filter item comprises a NOT connective and a type and value filter item, pushing the NOT connective associated with the type and value filter item inside the filter item, resulting in changing an operator

inside the filter item.” The portion of the Specification cited by the Examiner states, “If the filter item with a NOT connective is a type and value filter item then the present application pushes the NOT connective, into the filter item which avoids a NOT in the outer SQL.” (Specification, Page 12, lines 12-14)

Both Claim 5 and the cited portion of the specification describe the same condition (*i.e.*, if it is determined that the filter item comprises a NOT connective and a type and value filter item). If that condition is met, both Claim 6 and the cited portion of the Specification state that the NOT connective associated with the type and value filter item is pushed inside the filter item. Claim 6 recites that this pushing results in changing an operator inside the filter item. The Specification states that this pushing avoids a NOT in the outer SQL, which is not inconsistent with changing an operator inside the filter item. Thus, Claim 6 and the cited portion of the Specification appear to Applicant to be consistent. The source of the Examiner’s requirement that the passage describe eliminating the NOT connective, but pushing the NOT connective into a (different) filter item, is unclear to Applicant. Applicant also respectfully directs the Examiner’s attention to page 19, line 1 through page 20, line 17, which provides an example discussion of certain embodiments of the “pushing” recited in Claim 5.

With respect to dependent Claim 24, the Examiner states, “Claim 24 recites ‘may involve.’ It appears that such a limitation of the claim would actually involve at least one table join. It raises a question as [to] whether the limitation as claimed would perform [the] act.” (Office Action, Page 3) Although Applicant does not necessarily agree with the Examiner’s comments, Applicant has made a clarifying amendment to Claim 24 such that Claim 24 no longer recites “may involve.”

The M.P.E.P provides, “[I]f the language used by applicant satisfies the statutory requirements of 35 U.S.C. 112, second paragraph [which, as discussed above, Applicant believes it does], but the examiner merely wants the applicant to improve the clarity or precision of the language used, the claim must not be rejected under 35 U.S.C. 112, second paragraph, rather, the examiner should suggest improved language to the applicant.” M.P.E.P.

§ 2173.02. If the rejections under 35 U.S.C. § 112, second paragraph, were the only issue remaining in the Application, Applicant would consider amending certain claims according to a suggestion from the Examiner. However, given that the Examiner has not provided such a suggestion and, as discussed above, Applicant believes that at least certain of the rejected claims are definite as written, Applicant has not made such amendments (except to Claims 1, 9, 17, 24, 28, and 36) in this Response.

For at least these reasons, Applicant respectfully submits that Claims 1, 4-9, 12-17, 20-22, 24-28, and 31-36 are definite, in compliance with 35 U.S.C. § 112, second paragraph. Thus, Applicant respectfully requests that the Examiner withdraw the rejections of these claims under 35 U.S.C. § 112, second paragraph.

II. The Claims Recite Patentable Subject Matter

The Examiner rejects Claims 1, 4-9, 12-17, 20-22, 24-28, and 31-36 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicant respectfully disagrees.

With respect to independent Claims 1, 9, 17, 28, and 36, the Examiner states the following:

Claims 1, 9, 17, 28 and 36 recite “if it is determined that the filter item comprises a NOT connective and a type only filter item, apply a logical methodology to evaluate the NOT connective, the logical methodology comprising expanding an expression of the filter item so that the filter item does not comprise the NOT connective” could be reasonably considered a tangible and useful result when the dirty data items are selected, it appears to have no claimed result in the condition when the filter items does not comprise a NOT connective; and when the filter item does not comprise one of a type only filter item or a type and value filter item to form the basis [for] statutory subject matter under 35 U.S.C. 101.

(Office Action, Page 4) Applicants respectfully traverse this rejection.

According to the M.P.E.P., “[t]he claimed invention as a whole must be useful and accomplish a practical application. That is, it must produce a “useful, concrete and tangible result.” M.P.E.P. § 2106(II)(a) citing *State Street*, 149 F.3d at *1373-74, 47 USPQ2d at 1601-02. “The purpose of this requirement is to limit patent protection to inventions that possess a

certain level of ‘real world’ value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research. M.P.E.P. § 2106(II)(A)

It appears that the Examiner essentially is requiring the claim to recite each possible outcome of the determinations made in Claim 1 for the claim to be statutory. The Examiner has not provided any citation (*e.g.*, to applicable statutes, case law, regulation, or rules) to support the Examiner’s position, and Applicant is aware of no such authority. For example, Applicant is not aware of any *per se* rule requiring Applicant to state each outcome of a conditional test in a claim for a claim to recite a useful, concrete, and tangible result, and to be statutory. All that the law requires is that a claim recite *a* useful, concrete, and tangible result to be statutory. The rejected claims do so.

With respect to Claims 6, 14, and 33, the Examiner states that these claims do “not provide any tangible, concrete and useful result to form the basis statutory under 35 USC 101.” (Office Action, Page 4) Claims 6, 14, and 33 depend from independent Claims 1, 9, and 28, which Applicant has shown above to be directed to statutory subject matter, and are therefore directed to statutory subject matter. These dependent claims incorporate the limitations of their respective independent claims (and therefore recite a useful, concrete, and tangible result), and add a further determination to the condition test recited in their respective independent claims.

With respect to Claim 7, the Examiner states that Claim 7 “appears to have no claimed result in the condition when if each filter item can be pre-evaluated to true.” (Office Action, Page 4) Claim 7 depends from independent Claim 1, which Applicant has shown above to be directed to statutory subject matter, and is therefore directed to statutory subject matter. Dependent Claim 7 incorporate the limitations of Claim 1 (and therefore recites a useful, concrete, and tangible result), and adds a further determination to the condition test recited in Claim 1.

For at least these reasons, Applicant respectfully submits that independent Claims 1,

9, 17, 28, and 36 and their dependent claims recite patentable subject matter and requests withdrawal of the rejections of these claims under 35 U.S.C. § 101.

III. The Claims are Allowable over *Antoshenkov*

The Examiner rejects Claims 1, 4-9, 12-17, 20-22, 24-28, and 31-36 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,664,172 to Antoshenkov ("*Antoshenkov*"). Applicant respectfully traverses these rejections.

"A claim is anticipated only if *each and every element as set forth in the claim* is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added); M.P.E.P. § 2131. In addition, "[t]he identical invention must be shown in *as complete detail as contained in the . . . claim.*" *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989) (emphasis added); *see also* M.P.E.P. § 2131. Furthermore, "[t]he elements must be arranged *as in the claim* under review." *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990) (emphasis added); M.P.E.P. § 2131. As illustrated below, *Antoshenkov* does not appear to disclose, either expressly or inherently, each and every limitation recited in Applicant's independent claims, as is required under the M.P.E.P. and governing Federal Circuit cases. Applicant discusses independent Claim 1 as an example.

For example, *Antoshenkov* fails to disclose, teach, or suggest at least the following limitations recited in Claim 1:

- applying a condition test to each filter item of the filter, the condition test comprising:
 - determining if the filter item comprises a NOT connective; and
 - determining if the filter item comprises one of a type only filter item or a type and value filter item; and
- if it is determined that the filter item comprises a NOT connective and a type only filter item, applying a logical methodology to evaluate the filter item, the logical methodology comprising expanding an expression of the filter item so that the filter item does not comprise the NOT connective.

The Examiner cites column 8, lines 52-64 and column 15, lines 48-52 of *Antoshenkov*

as allegedly disclosing the limitations recited in Claim 1. The first cited portion relates to the optimization of the compiling phase of the query processing technique disclosed in *Antoshenkov*. (See Column 8, line 41) During the compiling step, the query is transformed to canonical form, such as a data structure representing the query in the form of a Boolean tree (which can be stored as a data structure in the form of a vector). (See Column 8, lines 42-46) The Boolean tree is reduced to a canonical form by applying the following general logic principle to the expressions of the query. (Column 8, lines 48-51)

According to *Antoshenkov*, all NOT logical operators of the query may be eliminated by applying the well-known De Morgan's law which inverts logical comparison operators, and by reversing logical AND and OR operators where necessary. (Column 8, lines 52-55) *Antoshenkov* discloses as an example that if *s1* and *s2* (segments) represent arbitrary attributes or key segments having values *u* and *v*, respectively, then:

NOT(*s1*=*u* AND *s2*>*v*) becomes NOT(*s1*=*u*) OR NOT (*s2*>*v*));

NOT(*s1*=*u* OR *s2*=*v*) becomes NOT(*s1*=*u*) AND NOT (*s2*=*v*));

NOT(*s1*=*u*) becomes (*s1*<*u*) OR (*s1*>*v*); and

NOT(*s2*>*v*) becomes (*s2*≤*v*), and so forth.

According to *Anthoshenkov*, this results in elimination of the NOT operators. (Column 8, lines 56-65)

The second cited portion of *Antoshenkov* discloses the following:

With the expanded Boolean tree with pointers and flags as detailed above, the logical evaluation of the key segments, and the propagation of the logical conditions derived from the evaluation will now be described, first generally, and then with specific reference to a preferred implementation.

(Column 15, lines 48-52)

There is simply no disclosure, teaching, or suggestion in the cited portions of *Antoshenkov* of **applying a condition test to each filter item** of a filter, the condition test comprising **explicitly making both of the following determinations**: (1) determining if the filter item comprises a NOT connective; and (2) determining if the filter item comprises one of a type only filter item or a type and value filter item. In particular, nowhere does

Antoshenkov disclose, teach, or suggest explicitly “determining if the filter item comprises one of a type only filter item or a type and value filter item,” as recited in Claim 1. The Examiner seems to imply that because *Antoshenkov* purportedly attempts to eliminate all NOT operators of a query, *Antoshenkov* discloses making some determination about type-only filter items as well as type-and-value filter items. (See Office Action, Page 5) First, Applicant does not necessarily agree with the Examiner’s interpretation of *Antoshenkov*. Second, even assuming for the sake of argument only the Examiner’s interpretation is correct, the fact that *Antoshenkov* may disclose a goal of eliminating all NOT operators of a query does not necessarily mean that the system disclosed in *Antoshenkov* is making any such determination (or that *Antoshenkov* discloses, teaches, or suggests making such a determination). However, nowhere do the cited portions of *Antoshenkov* appear to disclose, teach, or suggest determining if the filter item comprises one of two classes of filter items: a type only filter item or a type and value filter item.

Additionally, at least because *Antoshenkov* fails to disclose, teach, or suggest applying the condition test recited in Claim 1, *Antoshenkov* necessarily fails to disclose, teach, or suggest “if it is determined that the filter item comprises a NOT connective and a type only filter item, applying a logical methodology to evaluate the filter item, the logical methodology comprising expanding an expression of the filter item so that the filter item does not comprise the NOT connective,” as recited in Claim 1. *Antoshenkov* fails to disclose, teach, or suggest making any such determination and therefore fails to disclose taking any action (*i.e.*, applying) based on the outcome of that determination.

For at least these reasons, Applicant respectfully submits that the proposed combination fails to disclose, teach, or suggest each and every limitation recited in Claim 1. Independent Claims 9, 17, 28, and 36 are rejected for substantially the same reasons as independent Claim 1. For at least certain reasons analogous to those discussed above with respect to independent Claim 1, Applicant respectfully submits that *Antoshenkov* fails to disclose, teach, or suggest each and every limitation recited in independent Claims 9, 17, 28, and 36. Thus, for at least these reasons, Applicant respectfully requests reconsideration and allowance of independent Claims 1, 9, 17, 28, and 36 and their dependent claims.

IV. No Waiver

All of Applicant's arguments and amendments are without prejudice or disclaimer. Additionally, Applicant has merely discussed example distinctions from the references cited by the Examiner. Other distinctions may exist, and Applicant reserves the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicant does not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicant are sufficient to overcome the Examiner's rejections.

Conclusion

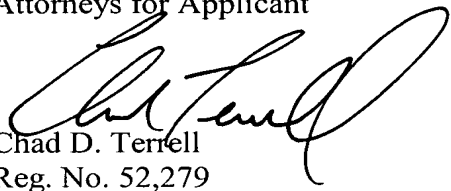
Applicant has made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicant respectfully requests full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Chad D. Terrell, Attorney for Applicant, at the Examiner's convenience at (214) 953-6813.

Although no fees are believed to be due, the Commissioner is hereby authorized to charge any necessary fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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